

AI in Industry Day – CSIRO National Artificial Intelligence Centre

Speech by Innes Willox, Chief Executive of the national employer association Ai Group

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Australian industry (including critical infrastructure and their suppliers) need to more actively take up AI? What's stopping them?

The Australian Industry Group celebrates 150 years this year. Central to our purpose is assisting Australian businesses to cope with change. In our history we have guided members through two world wars, a depression, several recessions, two global pandemics and countless industry plans.

Today, we are focussed on guiding policy makers and industry through the big three challenges facing the Australian economy as we settle into the 21st Century economy. Those challenges are: Digitalisation, Decarbonisation and Diversification.

We believe that the adoption of artificial intelligence is central to meeting those challenges. While some of our member businesses create AI solutions, most are consumers of it, just like the rest of Australian businesses and the Australian community as whole.

The most responsible thing that Australian businesses can do for their customers, suppliers, staff – and indeed the Australian economy – is to embrace the potential of AI to transform their businesses.

AI will, if harnessed properly, improve productivity, unlock human capital and lift our international competitiveness.

It will bolster resilience in our supply chains, providing cushioning in the face of potential geostrategic shocks. And more than we have for decades, we face repeated and prolonged geopolitical shocks.

Where traditional supply chains 'plan and react' to disruptions, digitalised supply chains 'predict and prescribe' actions to take.

And, perhaps most importantly, AI will better enable companies to measure and manage their carbon footprint, ensuring we can meet our net zero ambitions.

But I'm going to let you in on a little secret: Businesses don't actually "buy AI". Instead, they buy a solution to their problem, that simply happens to have some AI in it alongside other digital technologies.

We've heard that it can take approaches to up to seven different vendors to find a complete AI-based solution to a business problem.

This is why the Australian Industry Group is excited to be working with CSIRO on days like this, providing a platform for companies to see and try out AI solutions, and to learn how to use the technology responsibly.

And it's working! Facilitating hands-on practical workshops reduces the mystique that surrounds AI today. This results in our members signing contracts, exploring new tech possibilities, and maximising the capability of the digital tech they already own.

That mystique is fuelling the sense that AI is everywhere and inevitable.

However, and as we have seen with Australian adoption of Industry 4.0 practices, that future of a sudden and smooth uptake is not assured.

Australia is well behind similarly-sized countries when it comes to the take up of robotics, assistive tech and IoT in industry.

Might we also fall behind our peers in bringing AI into the industrial ecosystem?

Of course, many businesses are progressing Industry 4.0 strategies without using the explicit label. Instead, their primary objectives are to better manage their operations, become more energy efficient, improve productivity, lower costs or meet new demands from customers. They simply see a business challenge and apply technology to it.

As with all processes of technological uptake, change is neither perfect nor easy, and missteps are just as common as successes. Regardless of where businesses are on their journey, most describe themselves beginners on Industry 4.0.

The following are some reasons given to us about why it is so difficult to just "buy that robot" or "implement that AI":

Changing organisational mindsets and getting the organisation to appreciate the impact of digitalisation and automation. This inevitably leads to addressing fears regarding "job loss", and focussing on "job quality improvement". A challenging conversation at the best of times.

However, in the current environment of economic uncertainty, it can risk alarming staff and triggering departures of key personnel.

Another is exposing gaps in leadership. Technology helps leaders focus on leading, yet also highlights where they do not. This elevates the need for people managers and critical thinkers, not traditional process leaders. Don't assume that workers have a monopoly on job loss fears.

Data use: AI is only as good as the data it is fed. While lots of data is being collected already, many businesses aren't sure what to do with it all. Finding the right people to turn the collected data into insights or monetary returns is proving to be a challenge.

People might have the technical ability, but not the creative and communication skills to maximise the use of data to support strategic goals. The other barrier is that there is widespread uncertainty as to who controls or owns the data.

Another concern is Interoperability issues: System integration has been a challenge but grows in size as new systems like AI get added into the mix. Cyber security is also a concern. We are hearing that some companies are actually disabling their IOT enabled machines to reduce cyber vulnerabilities.

Finally, the ever-present challenge of justifying the expenditure. Some businesses with digitalisation strategies have had difficulties defending expenditure on particular Industry 4.0 initiatives. We have to ask: Is this a lack of vision, or an unclear answer on the return on investment?

So what works?

Celebrating incremental success can be a good start. Some businesses have started small – rather than changing everything at once – to demonstrate success, and have then sought approval for bigger more transformative investment afterwards.

Building a technology adaptive culture. Getting traditional workers to trust data as much or, even better, more than their experience and intuition is step one of many to getting people comfortable – whether it is with robots, AI, or both.

Finding used cases outside of production and core business, and encouraging companies to develop an overall AI strategy, is key to lifting take up across the economy.

Notice that I haven't called for subsidies or tax breaks or any of the other usual suspects in industry policy?

That's because this is, at its core, a cultural and skills problem, not a money problem.

Skill needs in advanced manufacturing and critical infrastructure are broad and deep. The sectors need a mix of technical, generic and leadership skills. However, robotics and AI will increase the importance of digital within the skills mix. Skills in the digital space will be essential for not just specialist roles but the entire industrial workforce.

And every day it becomes clearer and clearer we are short of the skills we need to compete and excel.

Beyond business and leadership skills, the successful implementation of Industry 4.0 also requires two distinct but inter-related skills bases.

One are the technical skills involved in the design, implementation and integration of digital industry technologies.

A second are operational skills, required in workforces that make use of the tech, which enable its safe and efficient utilisation.

Our roads system requires us to train both auto mechanics and car drivers. So too will Industry 4.0 require us to train builders and the users of robotics and AI.

While both are equally important, the builders are often prioritised in policy while the users receive less attention.

And let's not forget about all that underutilised data. We will need to upskill all kinds of workers to understand what the data is telling them and how to use it to predict and prepare for the future.

But fundamental to maximising take up of AI will be lifting the capability of leaders and managers to develop and execute new business strategies that ensures Australian businesses are equal to if not exceeding their international peers.

AI is not new. It has been with us since the 1950s. Every time you get in a plane and the pilot switches on autopilot – that's AI. Every time you put your car in cruise control, that's AI.

But what has happened since the introduction of ChatGPT just on a year ago has been a massive step change in terms of the potential, knowledge, excitement and fear about the role of AI in our lives. In terms of technology, it was perhaps a Neil Armstrong moment – a giant leap for mankind as it were.

When it comes to technology, it is sometimes said that America creates, Europe regulates. My ambition for Australia as we square up to this new world is that we do more than sit on the sidelines of both.

My hope is that we courageously create and use AI to emerge as new businesses in a digitalised, decarbonized – and sometimes disrupted – world.

Innes Willox